

Proposed At
Interview

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

ATTY.'S DOCKET: KUBOMURA=1

In re Application of:)	Art Unit: 1772
Kenji KUBOMURA et al)	Examiner: J. Pierce
Appln. No.: 09/720,372)	Washington, D.C.
Date Filed: March 9, 2001)	Confirmation No.: 2532
For: FIBER-REINFORCED RESIN)	September 5, 2003
COMPOSITE MATERIAL HAVING)	
REDUCED COEFFICIENT...)	

PROPOSED AMENDED CLAIMS

1. (Currently Amended) In-plane quasi-isotropic fiber reinforced resin composite material having a reduced or low coefficient of linear expansion that approaches substantially zero by combining sheets woven by one kind or more than one kind of reinforcing fibers, each coefficient of linear expansion of said sheets being controlled to be balanced by combining a matrix resin and two or more kinds of reinforcing fibers wherein said reinforcing fibers include at least one kind of reinforcing fibers having a negative coefficient of linear expansion, wherein said matrix resin is used to control the coefficient of linear expansion of the composite material such that said coefficient approaches substantially zero.

2. (Currently Amended) In-plane quasi-isotropic fiber reinforced resin composite material having a reduced or low coefficient of linear expansion that approaches substantially zero as claimed in claim 1, said material characterized

in that monofilament, yarn doubling or blending strand is used for said two or more kinds of reinforcing fibers.

3. (Currently Amended) In-plane quasi-isotropic fiber reinforced resin composite material having a reduced or low coefficient of linear expansion that approaches substantially zero as claimed in claim 1, wherein said coefficient of linear expansion is reduced by combining sheets woven by one or more kinds of reinforcing fibers of which a coefficient of linear expansion is controlled by a three dimensional structure of twisted yarn, biaxial textile or triaxial textile.

4. (Currently Amended) In-plane quasi-isotropic fiber reinforced resin composite material having a reduced or low coefficient of linear expansion that approaches substantially zero by combining sheets with different coefficients of linear expansion woven by one or more kinds of reinforcing fibers, wherein each coefficient of linear expansion of said reinforcing fibers is controlled to be balanced by combining a matrix resin and two or more kinds of reinforcing fibers wherein at least one kind of said reinforcing fibers has a negative coefficient of linear expansion, wherein said matrix resin is used to control the coefficient of linear expansion of the composite material such that said coefficient approaches substantially zero.

Claims 5 and 6. (Cancelled)

7. (Currently Amended) In-plane quasi-isotropic fiber reinforced resin composite material having a reduced or low coefficient of linear expansion that

approaches substantially zero as claimed in ~~claim m~~ claim 2, wherein said coefficient of linear expansion is reduced by combining sheets woven by more than one kind of reinforcing fibers of which a coefficient of linear expansion is controlled by three dimensional structure of twisted yarn, biaxial textile or triaxial textile.

Claims 8-20. (Cancelled)

21. (Previously Presented) The fiber reinforced resin composite material of claim 1 wherein different sheets of reinforcing fibers have different coefficients of linear expansion.

22. (Previously Presented) The fiber reinforced resin composite material of claim 3 wherein different sheets of reinforcing fibers have different coefficients of linear expansion.

23. (Currently Amended) The fiber reinforced resin composite material of claim 4 wherein ~~different sheets of~~ each of said two or more kinds of reinforcing fibers have different coefficients of linear expansion.

Claims 24-27. (Cancelled).

28. (Previously Presented) The fiber reinforced resin composite material of claim 1 wherein at least one of said sheets is at least partly woven of carbon fibers or polyparaphenylene benzo oxazole.

29. (Previously Presented) The fiber reinforced resin composite material of claim 3 wherein at least one of said sheets is at least partly woven of carbon fibers or polyparaphenylene benzo oxazole.

30. (Previously Presented) The fiber reinforced resin composite material of claim 4 wherein at least one of said sheets is at least partly woven of carbon fibers or polyparaphenylene benzo oxazole.

31. (Cancel) ~~The fiber reinforced resin composite material of claim 1 which is substantially fully balanced among said two or more kinds of reinforcing fibers and said resin.~~

32. (Cancel) ~~The fiber reinforced resin composite material of claim 4 which is substantially fully balanced among said two or more kinds of reinforcing fibers and said resin.~~